Listing of Statistics for Runl-2007 (Created Fri Apr 20 09:07:41 CDT 2007)

Total Amount of User Time in this interval 1534.95 Hours

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User periods in this interval
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01/30/2007 08:00 To 02/06/2007 08:00 168.00 Hours, Delivered Beam:
166.50 Hours, 2 Fault(s), 83.25 MTBF, 99.11% of Sched. Time
02/07/2007 08:00 To 02/13/2007 08:00 144.00 Hours, Delivered Beam:
143.43 Hours, 1 Fault(s), 143.43 MTBF, 99.61% of Sched. Time
02/14/2007 08:00 To 02/19/2007 08:00 120.00 Hours, Delivered Beam:
119.99 Hours, 0 Fault(s), 119.99 MTBF, 99.99% of Sched. Time
02/21/2007 08:00 To 02/27/2007 08:00 144.00 Hours, Delivered Beam:
141.00 Hours, 1 Fault(s), 141.00 MTBF, 97.92% of Sched. Time
02/28/2007 08:00 To 03/06/2007 08:00 144.00 Hours, Delivered Beam:
144.00 Hours, 0 Fault(s), 144.00 MTBF, 100.00% of Sched. Time
03/07/2007 08:00 To 03/12/2007 08:00 119.00 Hours, Delivered Beam:
116.41 Hours, 1 Fault(s), 116.41 MTBF, 97.83% of Sched. Time
03/14/2007 08:00 To 03/20/2007 08:00 144.00 Hours, Delivered Beam:
143.99 Hours, 0 Fault(s), 143.99 MTBF, 100.00% of Sched. Time
03/21/2007 08:00 To 03/27/2007 08:00 144.00 Hours, Delivered Beam:
135.74 Hours, 5 Fault(s), 27.15 MTBF, 94.27% of Sched. Time
03/28/2007 08:00 To 04/02/2007 08:00 120.00 Hours, Delivered Beam:
118.62 Hours, 1 Fault(s), 118.62 MTBF, 98.85% of Sched. Time
04/04/2007 08:00 To 04/10/2007 08:00 144.00 Hours, Delivered Beam:
142.50 Hours, 1 Fault(s), 142.50 MTBF, 98.96% of Sched. Time
04/11/2007 08:01 To 04/17/2007 08:00 143.98 Hours, Delivered Beam:
142.46 Hours, 1 Fault(s), 142.46 MTBF, 98.94% of Sched. Time
```

```
Delivered Beam
                                               1514.65 Hours
Percentage of Scheduled Time
                                                98.68 %
Downtime During Period
                                                 20.30 Hours
Percentage of scheduled time SR current > 10 ma 99.04 %
Average Delivered Current During This Period 101.24 mA
Total integrated Current During This Period
                                               153.35 A-hr
Mean Fill Duration in Period
                                               108.19 Hours
Mean Fill Duration from Poisson Fit
                                               128.65 Hours
Mean Time Between Faults (MTBF)
                                               116.51 Hours
Faults per Day of Delivered Beam
                                                 0.21
Total Number of Faults
                                                13
Scheduled Topup Time
                                               1391.00 Hours
```

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Length Downtime is associated with the end of a fill.

Valid fills Beginning in this Time Interval | Reason for | of The first fill of a period will have any | Fill # Start End Duration | Fill Termination | Downtime downtime before the fill on the line above.

(min: 1.0) |
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```
# 1 01/30 08:00 To 01/30 13:56 5.93 | RF2 trip
                                             [RF]
 0.42 Replaced blown fuse, refilled ring
# 2 01/30 14:21 To 02/06 03:27 157.10 | Bad CMPSI card [DIAG]
 1.08 Investigation, refill
# 3 02/06 04:31 To 02/06 07:59 3.47 | Int Dump: End of Period
0.00
______
 0.01
# 4 02/07 08:00 To 02/08 13:33 29.55 | Human Error [RF]
0.56 Reset trip, refilled ring
# 5 02/08 14:07 To 02/13 07:59 113.88 | Int Dump: End of Period
0.01
# 6 02/14 08:00 To 02/19 07:59 119.99 | Int Dump: End of Period
_____
 1.98 ComEd Power Sag, condition Inj. P.S., refill {Other
# 8 02/21 09:58 To 02/23 21:23 59.41 | S30B:Q2:PS failure [PS]
1.02 PS swap-out, refilled
# 9 02/23 22:24 To 02/27 07:59 81.59 | Int Dump: End of Period
0.00
0.00
# 10 02/28 08:00 To 03/06 07:59 144.00 | Int Dump: End of Period
0.05
# 11 03/07 08:02 To 03/11 13:24 100.36 | Raw P.S. failed [PS]
2.54 Repaired supply and GESPAC, refilled
# 12 03/11 15:56 To 03/12 08:00 16.06 | Int Dump: End of Period
0.00
# 13 03/14 08:00 To 03/20 07:59 143.99 | Int Dump: End of Period
0.00
0.00
# 14 03/21 08:00 To 03/22 18:12 34.21 | Raw P.S. trip [PS]
2.36 Condition tripped PS,1.1hr[PS];human error,1.3[OA]
# 15 03/22 20:34 To 03/23 00:22 3.80 | Tripped Raw P.S. [PS]
2.86 Repaired supply, conditioned, refilled
```

```
# 16 03/23 03:14 To 03/23 14:30
                               11.27 | RF2 Crowbar trip [RF]
 0.83 Investigation, refill
# 17 03/23 15:19 To 03/25 13:24
                               46.08 | Under investigation
 1.39
# 18 03/25 14:47 To 03/26 09:45 18.97 | RF2 Circ Flow trip [RF]
0.81 Investigation, refill
# 19 03/26 10:34 To 03/27 08:00 21.43 | Int Dump: End of Period
-0.00
______
0.01
# 20 03/28 08:00 To 03/28 23:52 15.87 | 4ID PSS trip [SI]
1.37 Investigation, condition PS, 0.89hr [SI], 0.48hr [OA]
# 21 03/29 01:14 To 04/02 07:59 102.75 | Int Dump: End of Period
0.01
# 22 04/04 08:00 To 04/05 19:15 35.26 | RF4 Anode V Drop [RF]
 1.49 Investigation, refill of ring
# 23 04/05 20:45 To 04/10 08:00 107.25 | Int Dump: End of Period
-0.00
______
_____
-0.01
# 24 04/11 08:00 To 04/16 09:40 121.66 | CMPSI card failed [DIAG]
1.53 S35A:V3's CMPSI card replaced, refilled
# 25 04/16 11:12 To 04/17 07:59 20.79 | Int Dump: End of Period
0.00
Top-Up Mode Statistics
______
Target Current Range 2.0, Minimum Injector Downtime = 8.0 minutes
Total
 Current in Range during Scheduled Topup Time 97.73 %
 Current in Range during Delivered Beam Time 99.18 %
 Injector Availability
                                         99.10 %
Period Beginning 01/30/2007 08:00
Current in Range
                                         98.67 %
Injector Availability
                                         98.53 %
 Out of Range at: 02/02/2007 17:35:50 to 02/02/2007 17:56:30 :
20.67 minutes
   Injector downtime: 02/02/2007 17:30:55 to 02/02/2007 17:56:25:
25.50 minutes
 Out of Range at: 02/02/2007 19:07:40 to 02/02/2007 19:16:30 :
8.83 minutes
   Injector downtime: 02/02/2007 19:02:45 to 02/02/2007 19:16:25:
13.67 minutes
 Out of Range at: 02/04/2007 22:15:40 to 02/04/2007 23:58:50 :
103.17 minutes
   Injector downtime: 02/04/2007 22:10:45 to 02/04/2007 23:58:45:
108.00 minutes
```

Period Beginning 02/07, Current in Range Injector Availability	/2007 08:00			98.14 % 98.04 %		
Out of Range at: 75.50 minutes Injector downtime: 79.75 minutes Out of Range at: 84.50 minutes Injector downtime: 89.33 minutes	02/09/2007	00:04:50	to	02/09/2007	01:20:20	:
	02/08/2007	23:59:55	to	02/09/2007	01:19:40	:
	02/12/2007	08:16:40	to	02/12/2007	09:41:10	:
	02/12/2007	08:11:45	to	02/12/2007	09:41:05	:
Period Beginning 02/14, Current in Range Injector Availability	/2007 08:00			100.00 %		
Period Beginning 02/21, Current in Range Injector Availability	/2007 08:00			98.59 % 98.35 %		
Out of Range at: 27.00 minutes	02/21/2007	23:32:51	to		23:59:51	:
Injector downtime: 31.83 minutes	02/21/2007	23:27:56	to	02/21/2007	23:59:46	:
Out of Range at: 60.83 minutes	02/22/2007	00:04:51	to	02/22/2007	01:05:41	:
<pre>Injector downtime: 63.42 minutes</pre>	02/21/2007	23:59:56	to	02/22/2007	01:03:21	:
Out of Range at: 0.17 minutes	02/22/2007	01:13:31	to	02/22/2007	01:13:41	:
Injector downtime: 8.00 minutes (est)						
Out of Range at: 31.67 minutes						
Injector downtime: 36.50 minutes	02/26/2007	15:30:26	to	02/26/2007	16:06:56	:
Period Beginning 03/07/2007 08:00						
Current in Range Injector Availability Out of Range at:	03/08/2007	13.01.25	ŧ.o.	99.63 % 99.59 % 03/08/2007	13.27.15	
25.83 minutes Injector downtime:						
28.58 minutes	03, 00, 200,	11 33 33		00,00,200.	10 10 00	
Period Beginning 03/14, Current in Range Injector Availability	/2007 08:00			100.00 % 100.00 %		
Period Beginning 03/21, Current in Range Injector Availability	/2007 08:00			100.00 % 100.00 %		
Period Beginning 03/28, Current in Range Injector Availability	/2007 08:00			100.00 % 100.00 %		

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Period Beginning 04/04/2007 08:00
Current in Range
                                                 97.36 %
Injector Availability
                                                 97.21 %
  Out of Range at: 04/05/2007 \ 09:29:24 \ \text{to} \ 04/05/2007 \ 11:46:34:
137.17 minutes
    Injector downtime: 04/05/2007 09:24:29 to 04/05/2007 11:46:29:
142.00 minutes
                       04/05/2007 20:46:24 to 04/05/2007 20:54:24 :
  Out of Range at:
8.00 minutes
    Injector downtime: 04/05/2007 20:38:24 to 04/05/2007 20:46:24:
8.00 minutes (est)
  Out of Range at:
                       04/05/2007 23:36:44 to 04/05/2007 23:59:54 :
23.17 minutes
    Injector downtime: 04/05/2007 23:31:49 to 04/05/2007 23:59:49:
28.00 minutes
 Out of Range at:
                       04/06/2007 07:05:24 to 04/06/2007 08:02:34:
57.17 minutes
    Injector downtime: 04/06/2007 07:00:29 to 04/06/2007 08:01:24:
60.92 minutes
Period Beginning 04/11/2007 08:01
                                                 99.90 %
Current in Range
                                                 99.81 %
Injector Availability
 Out of Range at: 04/12/2007 22:45:34 to 04/12/2007 22:46:04:
0.50 minutes
   Injector downtime: 04/12/2007 22:37:34 to 04/12/2007 22:45:34:
8.00 minutes (est)
 Out of Range at:
                    04/16/2007 11:12:23 to 04/16/2007 11:20:13 :
7.83 minutes
    Injector downtime: 04/16/2007 \ 11:04:23 to 04/16/2007 \ 11:12:23:
8.00 minutes (est)
```